

AMENDMENTS TO THE CLAIMS

1. (Currently amended) A vehicle steering apparatus which uses a steering motor to supply a steering mechanism with steering force corresponding to a steering amount applied to a steering member, comprising:

a reaction force motor ~~[[for]]~~ supplying the steering member with steering reaction force;
a vehicle speed sensor ~~[[for]]~~ detecting a vehicle running speed;
a current sensor ~~[[for]]~~ detecting a motor current of the steering motor; and
a controller ~~[[for]]~~ performing operations of:

extracting a component within a predetermined frequency range out of the detected motor current ~~detected by the current sensor~~, said predetermined frequency range increasing and decreasing based on the detected vehicle running speed ~~detected by the vehicle speed sensor~~ and having a lower limit of ~~about~~ 3 Hz and an upper limit of ~~about~~ 9 Hz at high vehicle speed and an upper limit of ~~about~~ 15 Hz at low vehicle speed;

amplifying the extracted component with an amplification factor which increases as detected vehicle running speed decreases and decreases as detected vehicle running speed increases;

calculating said steering reaction force by

setting a target value of a steering reaction force which corresponds to the steering amount; and

adding to said target value ~~an additional value of steering reaction force corresponding to the extracted and amplified component~~; and

driving the reaction force motor so as to supply the steering member with the calculated steering reaction force ~~corresponding to the sum of the target value and the additional value~~.

Claims 2-9 (Cancelled).

10. (Original) The vehicle steering apparatus according to Claim 1, wherein the steering member and the steering mechanism are not connected mechanically with each other.

11. (Currently amended) A vehicle steering apparatus which uses a steering motor to supply a steering mechanism with steering force corresponding to a steering amount applied to steering means, comprising:

a reaction force motor for supplying the steering means with steering reaction force;

vehicle speed sensing means for detecting a vehicle running speed;

current detecting means for detecting a motor current of the steering motor;

extracting means for extracting a component within a predetermined frequency range out of the detected motor current ~~detected by the current detecting means~~, said predetermined frequency range increasing and decreasing based on the detected vehicle running speed ~~detected by the vehicle speed sensor~~ and having a lower limit of about 3 Hz and an upper limit of about 9 Hz at high vehicle speed and an upper limit of about 15 Hz at low vehicle speed;

amplifying means for amplifying the extracted component with an amplification factor which increases as detected vehicle running speed decreases and decreases as detected vehicle running speed increases;

calculating means for calculating steering reaction force by

means for setting a target value of a steering reaction force which corresponds to the steering amount; and

adding means for adding to said target value ~~an additional value of steering reaction force corresponding to~~ the component extracted and amplified by the extracting means, and

reaction force motor driving means for driving the reaction force motor so as to supply the steering means with the calculated steering reaction force ~~corresponding to the sum of the target value and the additional value~~.

Claims 12-19 (Cancelled).

20. (Original) The vehicle steering apparatus according to Claim 11, wherein the steering means and the steering mechanism are not connected mechanically with each other.

Claim 21 (Cancelled).